



Navajo Nation Drought Impacts

NAVAJO NATION

Division of Natural Resources

Department of Water Resources

May 11, 2021

NAVAJO NATION – WATER MONITORING INVENTORY (WMI) SECTION

OBJECTIVES

- Provide technical support for litigation and negotiation of Navajo Nation water rights
- Monitor, analyze and document water resources on the Navajo Nation
- Provide historical and current available data to interested individuals and entities
- Maintains water resources database



DROUGHT VULNERABILITY

NAVAJO WATER USERS VULNERABLE TO DROUGHT:

- COVID-19 PANDEMIC
- DOMESTIC WATER HAULERS
- PUBLIC DRINKING SYSTEMS-NTUA, BIA, PRIVATE
- IRRIGATORS AND DRYLAND FARMERS
- LIVESTOCK OWNERS, RANCHERS
- WILDLIFE, FORESTRY (FORESTLANDS), AND RECREATION



NAVAJO NATION
DROUGHT CONTINGENCY PLAN
2003



PREPARED BY:
NAVAJO NATION
DEPARTMENT OF WATER RESOURCES

IN COOPERATION WITH:
U.S. Bureau of Reclamation
U.S. Bureau of Indian Affairs
Navajo Nation Department of Emergency Management

The objectives of the Navajo Nation Drought Contingency Plan 2003 are to:

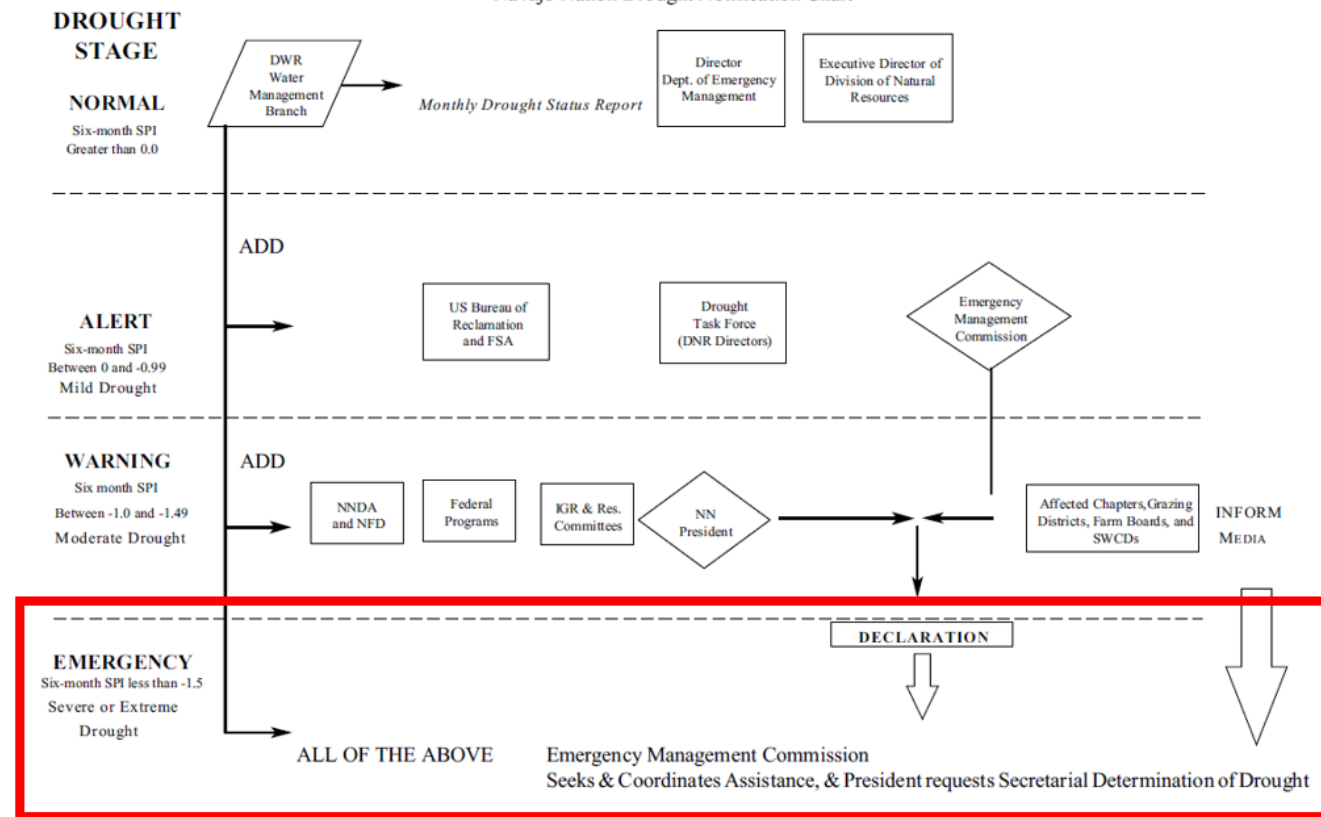
- Provide an effective and systematic means of assessing drought conditions
- Develop mitigation actions and programs to reduce risk in advance of drought
- Develop response options that minimize hardships during drought

Specific objectives of the drought plan are to:


- Collect, analyze and disseminate drought related information in a timely manner
- Establish criteria for declaring drought and triggering mitigation and response activities
- Describe the organization structure and the responsibilities of programs with respect to drought
- Prepare and inventory of state and federal programs and provide action recommendations
- Identify drought prone areas and vulnerable sectors
- Identify mitigation actions
- Provide a mechanism to ensure a timely and accurate assessment of drought impacts



Figure 6.1
Navajo Nation Drought Notification Chart



Source: Navajo Nation, Drought Contingency Plan, 2003, Navajo Nation Department of Water Resources, Page 67.



Recommended Responses

During **Drought Emergency**

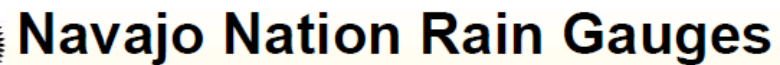
(Severe or Extreme Drought
SPI less than -1.50)

Source: Navajo Nation, Drought Contingency Plan, 2003, Navajo Nation Department of Water Resources, Drought Response, Table 6.4.

(Severe or Extreme Drought, SPI less than -1.50)	
Agency	Recommended Responses
Navajo Nation President	Based on recommendation of NDEM and EMC, declare a drought emergency Send letters to Secretaries for drought determination and assistance Support resolutions for supplemental drought assistance funding Direct the Drought Task Force to address impacts with programmatic funds
Drought Task Force (Division Directors)	Divisions may use programmatic funds if available to mitigate drought impacts
Emergency Management Commission (EMC)	Meet every other week or as need to review recently completed and planned work, and evaluate current monitoring data Recommend to, and concur with, the President on a Drought Emergency Declaration Seek and Coordinate assistance
Chapters	Implement Emergency Drought Contingency Plans Affected Chapters submit drought assistance resolutions to NDEM or amend previous resolutions recognizing emergency conditions Affected Chapters update NDWR, NNDA, and NDEM initial incident assessment drought forms and submit to appropriate departments Coordinate and administer local drought assistance (hauling, feed etc.) Respond to specific local needs if resources are available Assist with public service announcements
Navajo Tribal Utility Authority	Initiate Emergency Water Plans and possible rationing on affected systems
Grazing Districts	Affected Grazing Districts evaluate their rangeland Assist with livestock reduction Assist NNDA and FSA with USDA applications and assistance
Farm Boards	Affected Farm Boards evaluate their soil moisture and water supply Assist NNDA and FSA with USDA applications and assistance
Soil and Water Conservation Districts	Affected SWCDs coordinate with the Grazing District and Farm Boards

Active precipitation cans by Routine Routes

- Central: 5 precipitation cans
- Eastern: 13 precipitation cans
- Mountain: 21 precipitation cans
- Northern: 7 precipitation cans
- South: 25 precipitation cans
- Western: 14 precipitation cans
- 85 Total precipitation cans



COLORADO

NEW MEXICO

U T A H

ARIZONA



A horizontal number line representing distance in miles. It has major tick marks labeled 0, 20, 40, and 80 mi. There are also minor tick marks between the major ones, at intervals of 10 miles (10, 30, 50, 60, 70).



NAVAJO NATION – 6 MONTH SPI
(GRIDMET) BY AGENCIES
FROM NOV 1, 2020 – MAY 5, 2021



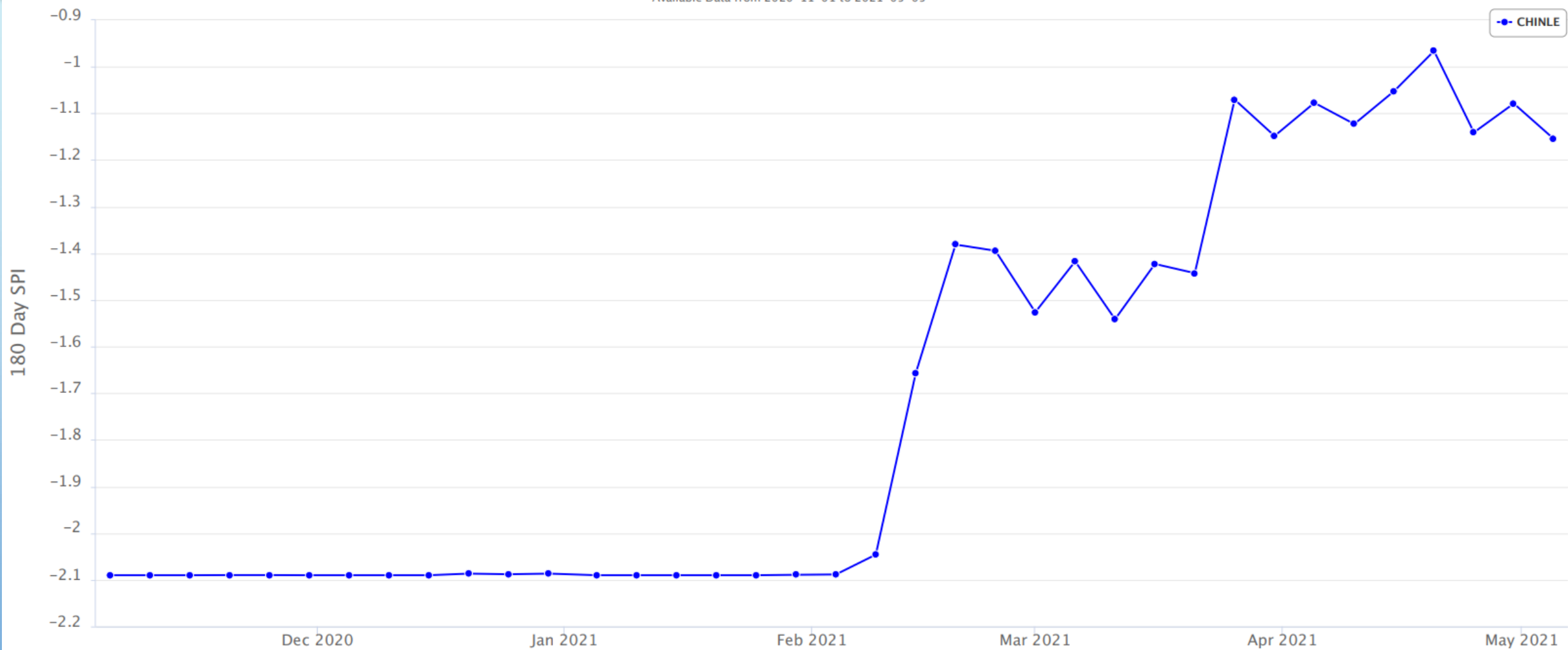
Climate Engine



Drought Severity Evaluation Tool

180 Day SPI (gridMET Drought)

Available Data from 2020-11-01 to 2021-05-05



Generated by ClimateEngine.org



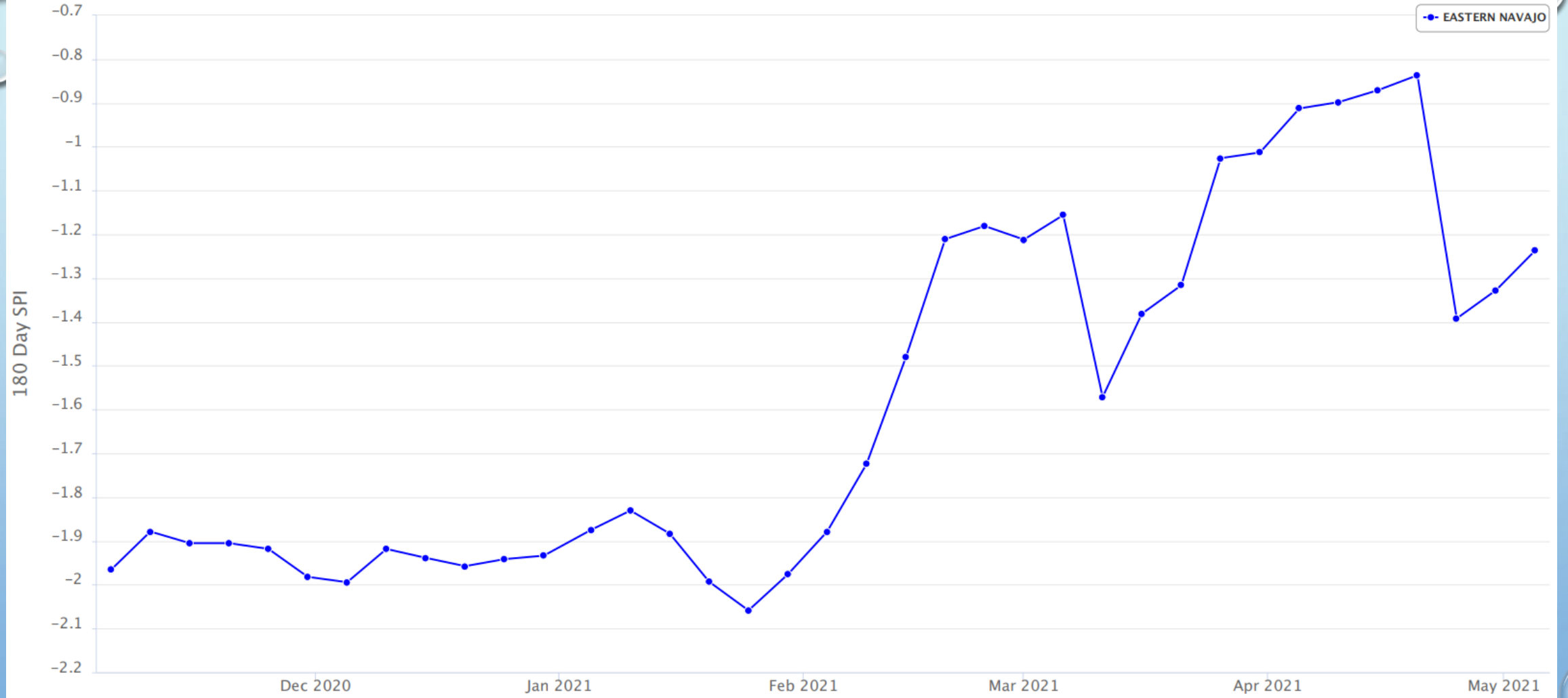
Climate Engine



Drought Severity Evaluation Tool

180 Day SPI (gridMET Drought)

Available Data from 2020-11-01 to 2021-05-05



Generated by ClimateEngine.org



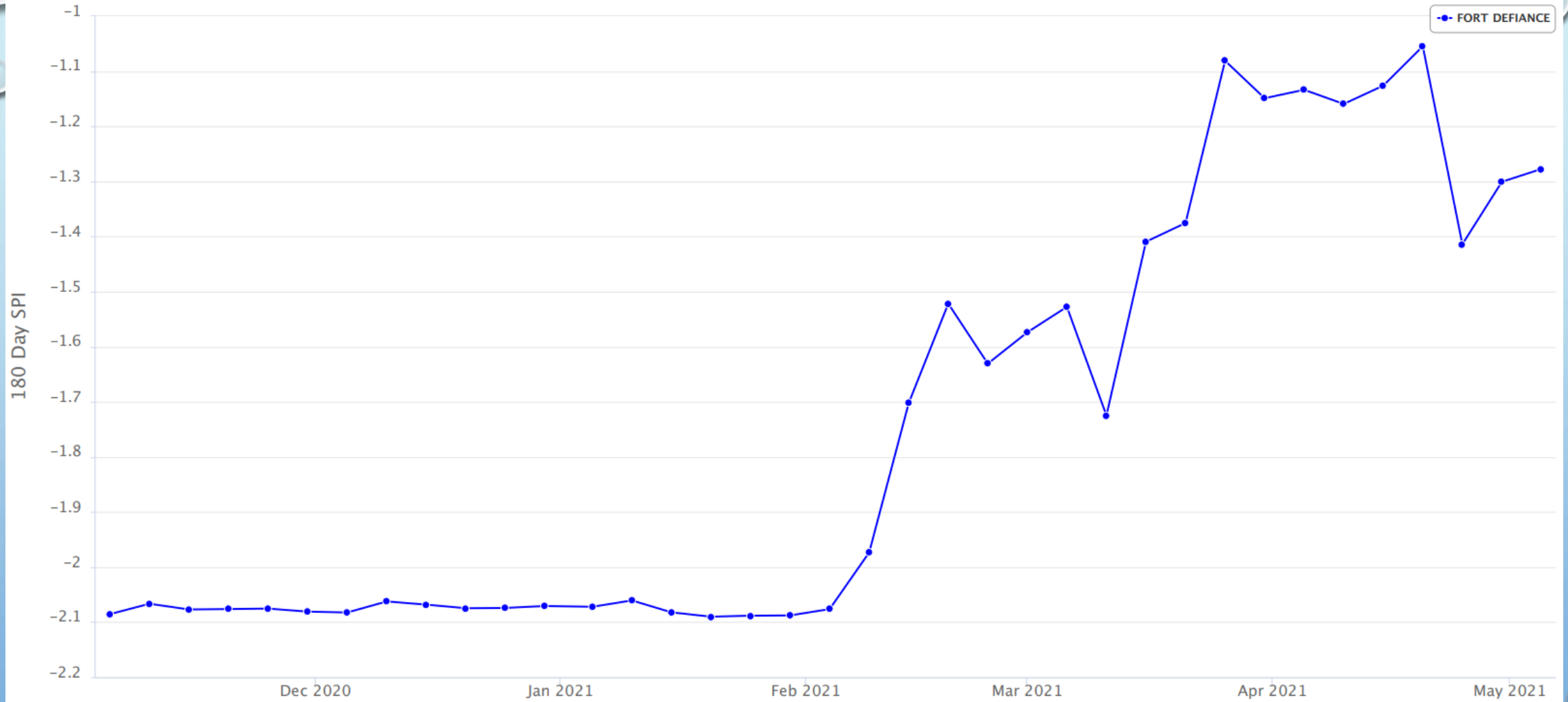
Climate Engine



Drought Severity Evaluation Tool

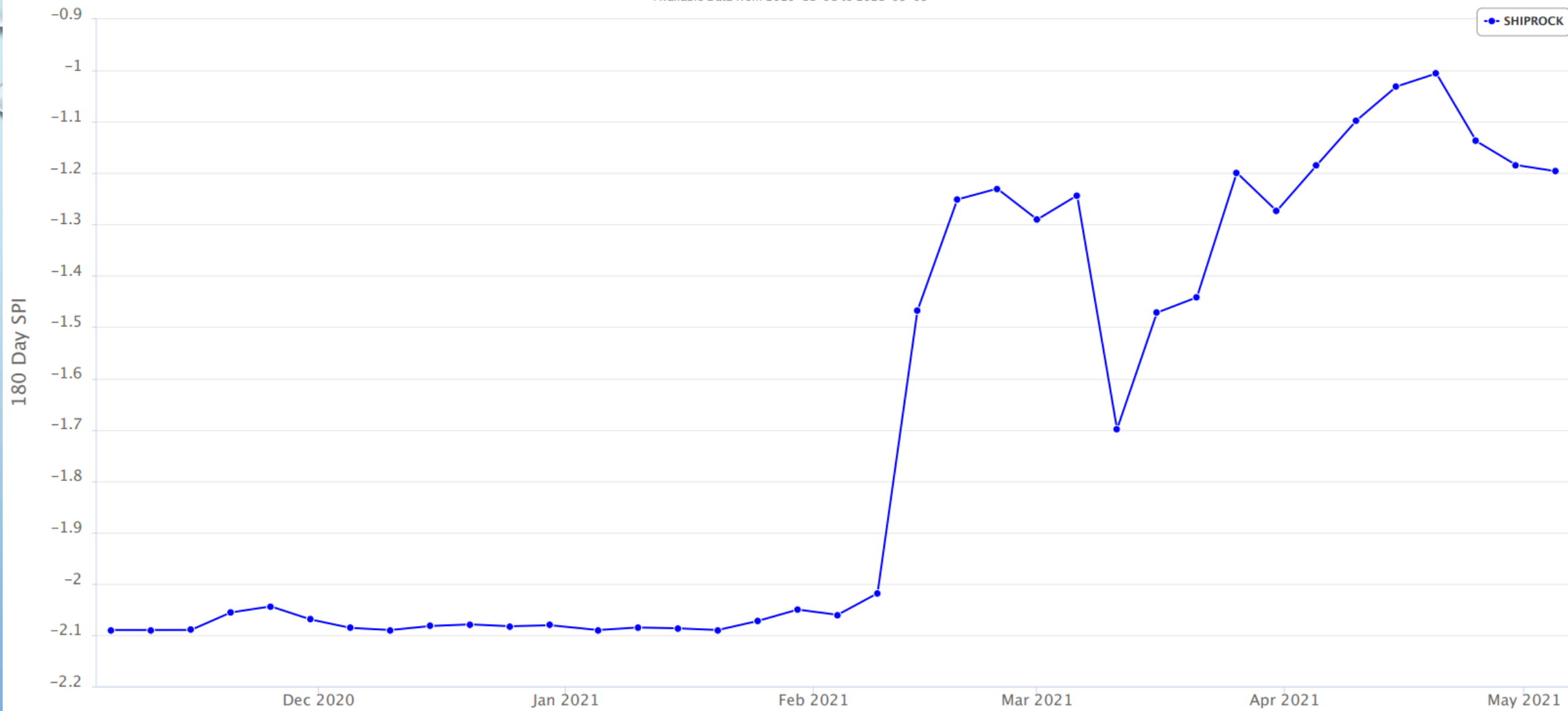
180 Day SPI (gridMET Drought)

Available Data from 2020-11-01 to 2021-05-05



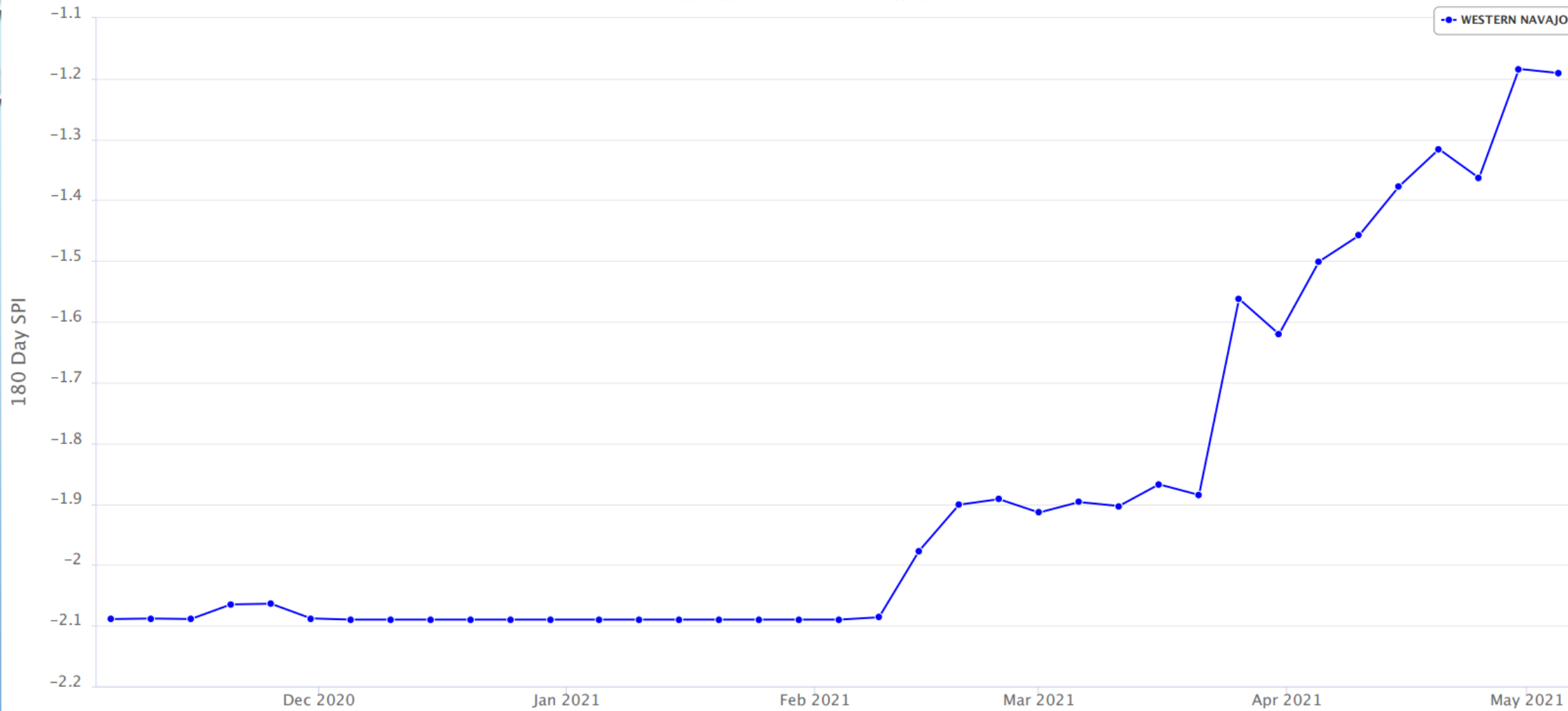
180 Day SPI (gridMET Drought)

Available Data from 2020-11-01 to 2021-05-05



180 Day SPI (gridMET Drought)

Available Data from 2020-11-01 to 2021-05-05

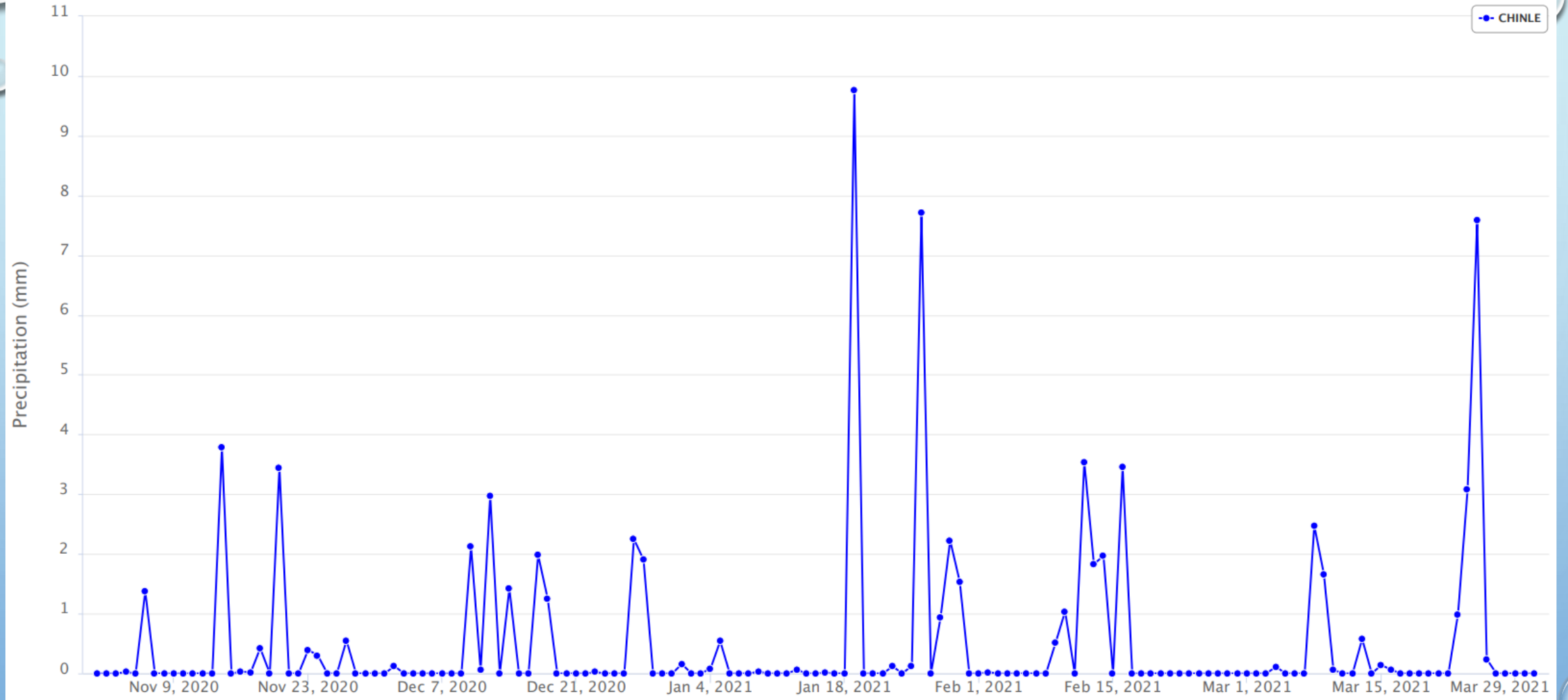




NAVAJO NATION – PRECIPITATION
(CHIRPS) BY AGENCIES
FROM NOV 1, 2020 – MARCH 31, 2021

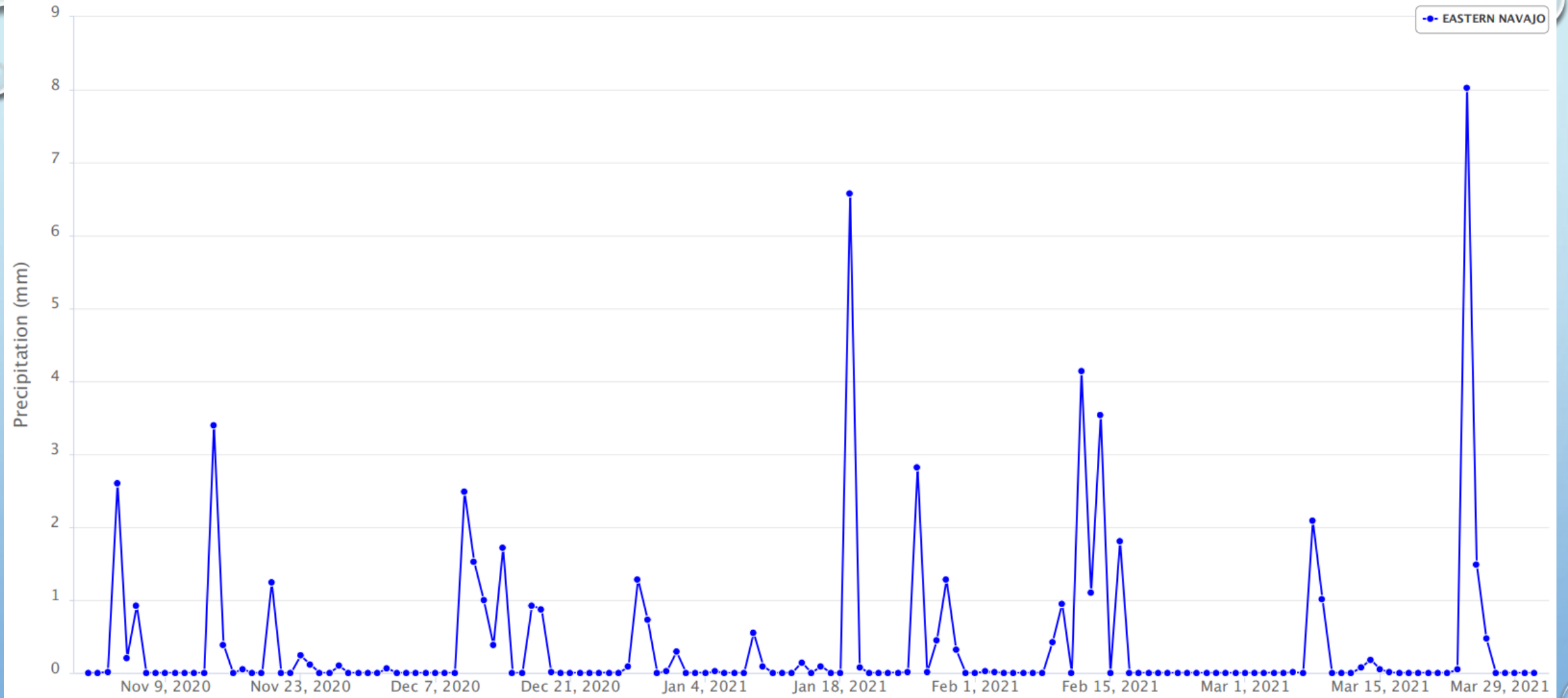
Precipitation (CHIRPS)

Available Data from 2020-11-01 to 2021-03-31



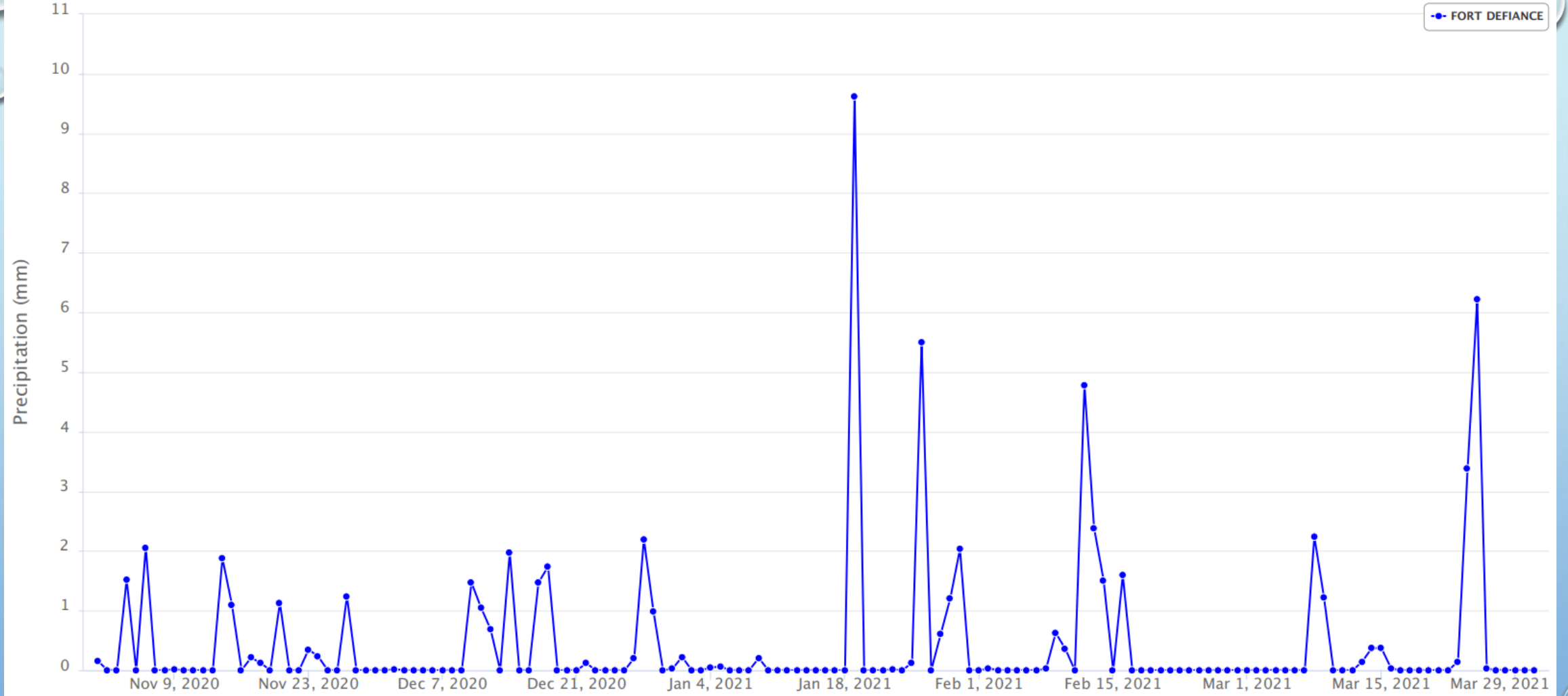
Precipitation (CHIRPS)

Available Data from 2020-11-01 to 2021-03-31



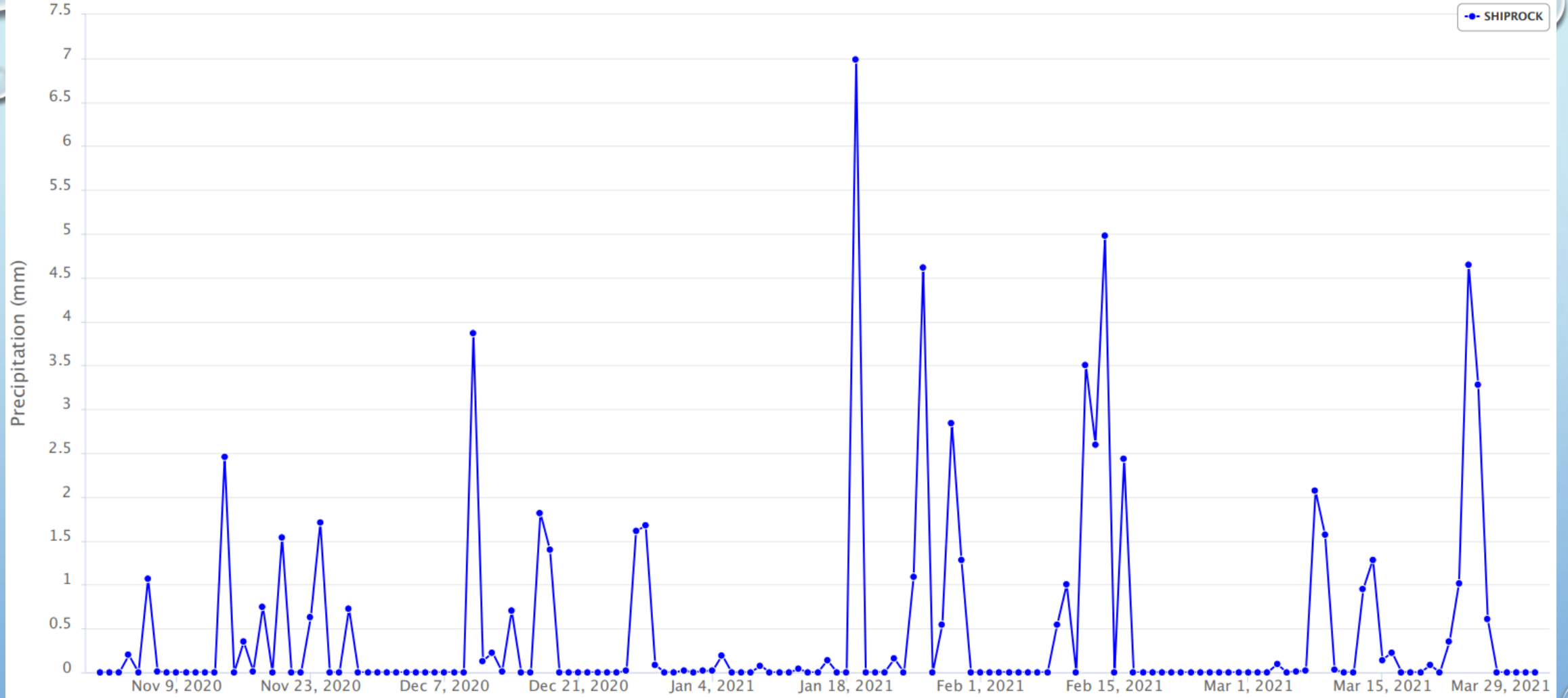
Precipitation (CHIRPS)

Available Data from 2020-11-01 to 2021-03-31



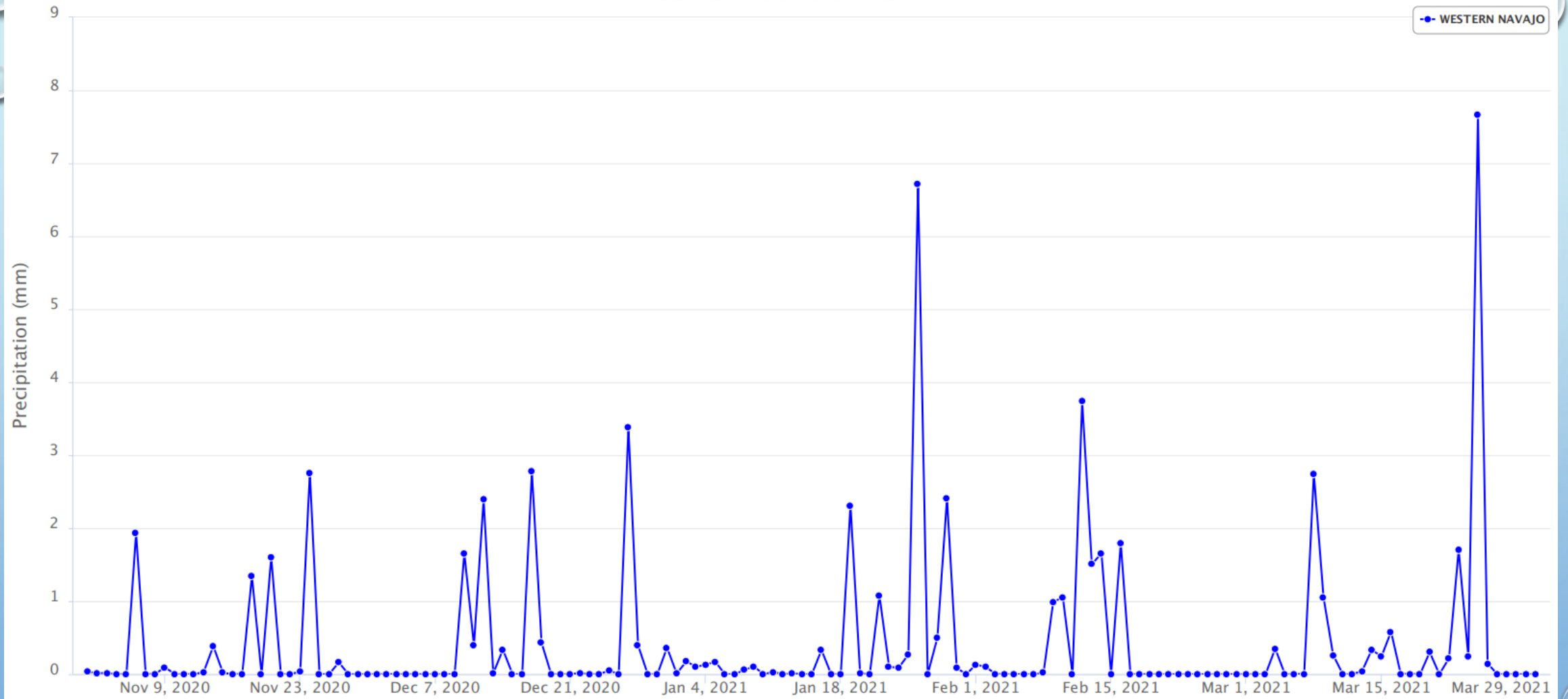
Precipitation (CHIRPS)

Available Data from 2020-11-01 to 2021-03-31



Precipitation (CHIRPS)

Available Data from 2020-11-01 to 2021-03-31

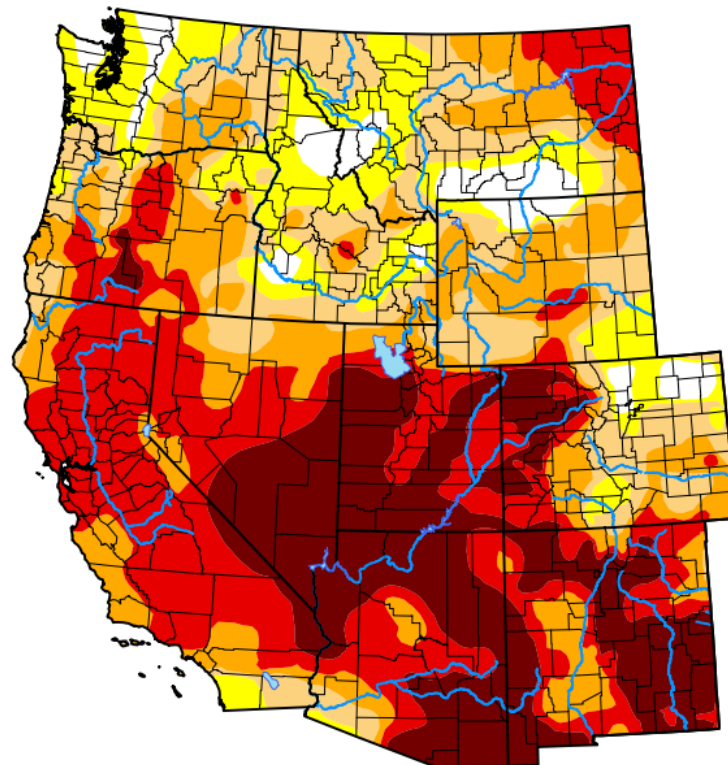


Generated by ClimateEngine.org









U.S. Drought Monitor West

May 4, 2021
(Released Thursday, May. 6, 2021)
Valid 8 a.m. EDT



Intensity:

-  None
-  D0 Abnormally Dry
-  D1 Moderate Drought
-  D2 Severe Drought
-  D3 Extreme Drought
-  D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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Western Regional Climate Center



droughtmonitor.unl.edu



QUESTIONS

DWR-WMB monthly Drought Reports

DWR-WMB monthly Precipitation Maps

Navajo Nation Drought Contingency Plan, 2003

www.frontiernet.net/~nndwr_wmb/

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